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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,222	01/31/2002	Klaus Zimmermann	50R4652/1593	5334

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EXAMINER

CHOWDHURY, NIGAR

ART UNIT PAPER NUMBER

2621

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/066,222	Applicant(s) ZIMMERMANN, KLAUS	
	Examiner Nigar Chowdhury	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-5, 7, 8, 20, 21-25, 27, 28, 40-43 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,441,754 by Wang et al.

2. Regarding claim 1, a system for performing a storage management procedure, comprising:

- An electronic device configured to receive information from an information source, electronic device responsively storing information into a storage medium (Fig. 5, Col. 6 line 54-64)
- A storage manager configured to control storage management procedure by selectively activating a data transcoding procedure that transcodes specified segments of information to thereby increase available storage space in storage medium, data transcoding procedure including an

immediate mode (during recording data information received by the device and transcodes the information) during which transcoding procedure occurs while information is initially being received by electronic device, data transcoding procedure further including a mediate mode (during playback of information) during which transcoding procedure occurs when information is not currently being received by electronic device (Fig. 5, from Col. 6 line 61-Col. 7 line 9).

3. Referring claim 2, the system of claim 1 storage medium is implemented to include at least one of a non-volatile storage medium, a hard-disk drive device (Fig. 5 (552), Col. 7 line 4), a tape storage device, and an optical disk drive.

4. Regarding claim 3, the system of claim 1 electronic device is implemented as an audio-video recorder device that stores information into said storage medium (Col. 5 line 63-65).

5. Considering claim 4, the system of claim 3 audio-video recorder device is implemented to receive and process any of a digital video signal, a digital audio signal, an analog video signal, an analog audio signal, and digital steam data (Col. 7 line 37).

6. Referring claim 5, the system of claim 3 audio-video recorder device (Fig. 5, 6) is implemented to include a central processing unit (Fig. 5 (503)), storage medium (Fig. 5

Art Unit: 2621

(505)), one or more analog-to-digital converters (Fig. 6 (612)), a plurality of input/output interfaces (Fig. 6 (603, 604)), and a device memory (Fig. 6 (605, 607)).

7. Regarding claim 7, the system of claim 1 immediate mode utilizes an audio transcoder to transcode audio input data into a more compact audio format before storing audio input data into storage medium, immediate mode similarly utilizing a video transcoder to transcode video input data into a more compact video format before storing video input data into storage medium (Fig. 5, Col. 7 line 1-10).

8. Referring claim 8, the system of claim 1 storage manager chooses one of a recording parameter alteration technique, a real-time input data transcoding technique, and a previously-stored data transcoding technique to perform immediate mode of storage management procedure (Col. 7 line 9-15, line 38-43).

9. Regarding claim 20, the of claim 1 wherein any portion of storage management procedure are implemented by utilizing electronic hardware circuitry that is coupled to electronic device. (Col. 8 line 41, 42)

10. Claims 21-25, 27, 28, 40 are rejected for the same reason as discussed in the corresponding claims 1-5, 7, 8, 20 respectively above.

Art Unit: 2621

11. Claims 41-43 are rejected for the same reason as discussed in the corresponding claim 1 respectively above

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 6, 10, 26, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,441,754 by Wang et al in view of U.S. Patent No. 6,768,864 by Kimura et al.

13. Regarding claim 6, Wang discloses device memory includes application software (Fig. 6 (606)), an operating system (Fig. 5 (503)), storage manager (Fig. 5 (505)), a video encoder (Fig. 5 (504)), an audio encoder (Fig. 5 (504)), a video transcoder (Fig. 5 (504)), an audio transcoder (Fig. 5 (504)), a storage medium driver (Fig. 5 (505)), and an interface driver (Fig. 6 (603,604)). Wang fails to disclose multiplexer and demultiplexer.

Kimura discloses multiplexer and demultiplexer (Fig. 1 (7, 10)). Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention

Art Unit: 2621

was made to have multiplexer (make audio and video together) and demultiplexer (to separate data) to improve cost effectiveness by using multiple wire to single wire.

14. Referring claim 10, Wang discloses mediate mode (Play back of the data) and transcode (Fig. 5 (504)). Wang fails to teach demultiplexer and multiplexer.

Kimura discloses mediate mode utilizes a demultiplexer to separate stored information into stored audio data and stored video data, said mediate mode then using an audio transcoder to transcode stored audio data into a more compact audio format, mediate mode similarly utilizing a video transcoder to transcode stored video data into a more compact video format, mediate mode then using a multiplexer to recombine stored audio data and stored video data into stored information which may then be rewritten back into storage medium in a more compact storage space (Fig. 1, from Col. 5 line 58 –Col.7 line 53).

Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have multiplexer (make audio and video together) and demultiplexer (to separate data) to improve cost effectiveness by using multiple wire to single wire.

15. Claims 26, 30 are rejected for the same reason as discussed in the corresponding claims 6, 10 above.

Art Unit: 2621

16. Claims 9 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,441,754 by Wang et al in view of U.S. Patent No. 5,270,829 by Yang.

17. Regarding claim 9, Wang discloses storage manager performs mediate mode of storage management procedure a mediate transcoding system to access and transcode one or more specified stored items from storage medium as part of a background process in electronic device. Wang fails to discloses scheduling of mediate transcode from storage medium.

Yang discloses scheduling of reserve recording and reserve playback. (Co. 4 line 1-12. User set up time for recording and playback for future.)

Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have automatic reserve recording and reserve playback of broadcasted program at a time specified by a user.

18. Claim 29 is rejected for the same reason as discussed in the corresponding claim 9 above.

19. Claims 11-13, 16-18, 31-33, 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,441,754 by Wang et al in view of U.S. Patent No. 6,577,812 by Kikuchi et al.

Art Unit: 2621

20. Regarding claim 11, Wang discloses storage medium but Wang fails to teach available storage space in the medium.

Kikuchi discloses a storage manager determines whether available storage space in storage medium is less than at least one predetermined storage-space threshold value that is selectable by a system user (Col. 2 line 22-26, 32-37. System will inform or display the remaining recordable time which means it will inform if storage medium is less than predetermined storage space).

Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have storage medium which will inform a user about the available space in the medium for further record.

21. Claims 12, 13 are rejected for the same reason as discussed in the corresponding claim 11 above.

22. Regarding claim 16, Wang discloses storage medium but Wang fails to teach available storage space in the medium.

Kikuchi discloses a storage manager determines to modify current recording parameters in immediate mode when data recording process is currently occurring in storage medium and storage space in storage medium is less than at least one predetermined storage-space threshold value that is selectable by a system user (Col. 2 line 22-26, 32-37, Col. 48 line 37-40). System will inform or display the remaining recordable time which means it will inform if storage medium is less than predetermined

Art Unit: 2621

storage space and referencing a system user preference to determine to operate immediate mode).

Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have storage medium which will inform a user about the available space in the medium for further record.

23. Claim 17 is rejected for the same reason as discussed in the corresponding claim 16 above.

24. Regarding claim 18, Wang discloses storage manager operates immediate mode using real time transcoding technique in which input data that is currently being received by electronic device.(Fig. 5, from Col. 6 line 61-Col. 7 line 9).

25. Claims 31-33, 36-38 are rejected for the same reason as discussed in the corresponding claims 11-13, 16-18 respectively above

26. Claims 14, 15, 34, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,441,754 by Wang et al in view of U.S. Patent No. 6,577,812 by Kikuchi et al and U.S. Patent No. 5,270,829 by Yang.

27. Regarding claim 14, Wang discloses storage medium but Wang fails to teach available storage space in the medium and scheduling of transcoding.

Kikuchi discloses a storage manager determines whether available storage space in storage medium is less than at least one predetermined storage-space threshold value that is selectable by a system user (Col. 2 line 22-26, 32-37, 64-67. System will inform or display the remaining recordable time which means it will inform if storage medium is less than predetermined storage space and it will also transcode the information).

Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have storage medium which will inform a user about the available space in the medium for further record.

The proposed combination of Wang and Kikuchi also fails to teach scheduling of transcoding.

Yang discloses scheduling of reserve recording and reserve playback (Co. 4 line 1-12. User set up time for recording and playback for future. When user select time for recording that set up by chronological system because it records the information by looking at the time and date. Any set up time come first records first and then go to the next time.)

Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have scheduled transcoding to transcode the information to fit in the storage medium if space is not enough.

28. Claim 15 is rejected for the same reason as discussed in the corresponding claim 14 above.

29. Claims 34, 35 is rejected for the same reason as discussed in the corresponding claims 14, 15 respectively above

30. Claims 19, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,441,754 by Wang et al and U.S. Patent No. 6,577,812 by Kikuchi et al. in view of U.S. Patent No. 6,768,864 by Kimura et al.

31. Regarding claim 19, Wang and Kikuchi discloses storage medium which records and reproduces information but they fails to disclose parallel transcoding of recording time and reproducing time.

Kimura teaches parallel transcoding technique in which information that has already been stored in to storage medium is transcoded in a background process, while input data that is currently being received by storage medium (Col. 12 line 22-33)

Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have parallel transcoding for consuming time.

32. Claim 39 is rejected for the same reason as discussed in the corresponding claim 19 above.

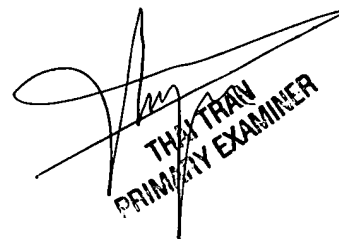
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nigar Chowdhury whose telephone number is 571-272-8890. The examiner can normally be reached on 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NC
05/10/2006


THAI TRAN
PRIMARY EXAMINER